

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

In the Office Action dated March 19, 2004, claims 2, and 4-17 were pending. In the Office Action, the Examiner withdrew a previously issued final rejection of the pending claims. Additionally, claims 2-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 5,974,662 to Eldridge, et al. ("Eldridge") and US Patent No. 4,566,953 to Kim ("Kim") in view of Wire Association Inc. ("Steel Wire Handbook").

In the present Amendment, claim 17 is cancelled. Figure 4 is amended to correct a typographical error.

A distinguishing element of the present invention, recited in independent claims 2 and 10, is a probe comprising a wire metallic core ("palladium alloy" in claim 2, "beryllium copper alloy" in claim 10) coated with a nickel (or nickel alloy) plating that is subject to wire drawing subsequent to plating of the core (claims 2 and 10: "and then a wire drawing operation with a wire drawing die is performed").

Eldridge teaches use of core materials for probes in probe cards that include copper alloys and palladium metal for probe core materials (column 12, lines 37-39) and include nickel for probe "shell" materials (column 12, lines 56-59). However, Eldridge fails to disclose or suggest a probe that is made by plating nickel to palladium alloy wire, "and then a wire drawing

operation with a wire drawing die is performed”, as recited in claim 2. Similarly, Eldridge fails to disclose or suggest a probe that is made by plating nickel to cooper beryllium alloy wire, “and then a wire drawing operation with a wire drawing die is performed”, as recited in claim 10.

While Kim teaches a process for pulse electroplating nickel-antimony coatings on wire (column 2, line 31–column 3, line 7), nowhere in the specification does Kim disclose “a wire drawing operation with a wire drawing die” as recited in claims 2 and 10 of the present invention. Although claim 3 of Kim recites “a wire which is drawn through the plating solution,” as argued below, the phrase *drawn through the plating solution* used in the claim does not admit of the meaning of *wire drawing* used in claims 2 and 10 of the present invention.

As a first matter, the specification in Kim at column 3, lines 1-7 describe the rate at which a given length of wire can be plated. For example, line 5 states that “2 feet per minute rate of wire can be coated with an acceptable nickel antimony thickness when a wire is passed through a 55 inch bath. It would be obvious to those skilled in the art that the “2 feet per minute” rate is based on the rate at which a plating film grows on the wire and the size of the bath. Thus, a length of wire is passed from one end of the bath to the other at a sufficiently slow speed to acquire the desired thickness. As is known to those skilled in the art, a wire drawing process through a wire drawing die, to the contrary, employs relatively rapid speeds. The latter process, as disclosed in page 22 of the Steel Wire Handbook, employ rates of 100-200 feet/min for “specialty” wires and about 1000 feet/min for other processes. Thus, the phrase of claim 3 in Kim “drawn through [a] plating solution,” in view of the specification in Kim that refers to a

“pass through” rate of 2 feet per minute, cannot fairly imply the process “drawn through a wire drawing die,” as recited in the present invention, where the latter process is known by those skilled in the art to employ “drawing” rates two to three orders of magnitude more rapid.

Moreover, even conceding *arguendo*, that “drawn through a plating solution” could imply that the wire being plated is being concomitantly drawn through a wire die, claim 3 of Kim does not state or suggest that the plating process occurs *before* such a conjectured wire drawing process. Rather, the claim and specification are completely silent on the latter issue.

Accordingly, Kim does not teach or fairly suggest a probe comprising a metallic core and plated nickel surface in which a “wire drawing operation with a wire drawing die is performed” *after* the plating process. Thus, Eldridge and Kim, whether taken singly or in combination, fail to teach or fairly suggest a probe comprising a wire metallic core coated with a nickel plating that is subject to wire drawing subsequent to plating, as recited in the independent claims 2 and 10 of the present invention.

Accordingly, upon entry of the present Amendment, independent claims 2 and 10, and, therefore, all the dependent claims thereto are believed to be in allowable condition.

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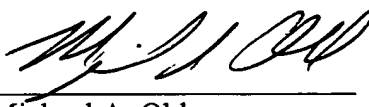
In view of the foregoing all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone applicants' undersigned representative at the number listed below.

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FIG. 4

